Complete Summary

GUIDELINE TITLE

Interventional techniques in the management of chronic spinal pain: evidence-based practice guidelines.

BIBLIOGRAPHIC SOURCE(S)

Boswell MV, Shah RV, Everett CR, Sehgal N, Mckenzie-Brown AM, Abdi S, Bowman RC, Deer TR, Datta S, Colson JD, Spillane WF, Smith HS, Lucas LF, Burton AW, Chopra P, Staats PS, Wasserman RA, Manchikanti L. Interventional techniques in the management of chronic spinal pain: evidence-based practice guidelines. Pain Phys 2005;8(1):1-47. [764 references]

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: Manchikanti L, Staats PS, Singh V, Schultz DM, Vilims BD, Jasper JF, Kloth DS, Trescot AM, Hansen HC, Falasca TD, Racz GB, Deer TR, Burton AW, Helm S, Lou L, Bakhit CE, Dunbar EE, Atluri SL, Calodney AK, et al. Evidence-based practice guidelines for interventional techniques in the management of chronic spinal pain. Pain Phys 2003;6:3-81.

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Chronic spinal pain

GUIDELINE CATEGORY

Diagnosis
Management
Technology Assessment
Treatment

CLINICAL SPECIALTY

Anesthesiology
Emergency Medicine
Family Practice
Internal Medicine
Neurological Surgery
Neurology
Orthopedic Surgery
Physical Medicine and Rehabilitation
Radiology
Rheumatology

INTENDED USERS

Allied Health Personnel
Health Plans
Managed Care Organizations
Patients
Physicians
Utilization Management

GUIDELINE OBJECTIVE(S)

- To develop evidence-based clinical practice guidelines for interventional techniques in the diagnosis and management of chronic spinal pain, with utilization of all types of evidence, applying an evidence-based approach, with broad representation of specialists from academic and clinical practices
- To improve quality of care, improve patient access, improve patient outcomes, improve appropriateness of care, improve efficiency and effectiveness, and achieve cost containment by improving the cost-benefit ratio

TARGET POPULATION

All patients with chronic spinal pain who are eligible to undergo commonly utilized and effective interventional technique(s)

INTERVENTIONS AND PRACTICES CONSIDERED

Diagnostic Interventional Techniques

1. Facet or zygapophysial joint diagnostic blocks
2. Provocative discography
3. Transforaminal epidural injections or selective nerve root blocks
4. Sacroiliac joint blocks

Therapeutic Interventional Techniques

1. Facet joint pain interventions
    - Intraarticular blocks
    - Medial branch blocks
    - Medial branch neurotomy
2. Epidural injections
    - Caudal epidural injections
    - Interlaminar epidural injections
    - Transforaminal epidural injections
3. Epidural adhesiolysis
    - Percutaneous adhesiolysis
    - Endoscopic adhesiolysis
4. Sacroiliac joint interventions
    - Intraarticular injections
    - Radiofrequency neurotomy
5. Intradiscal therapies
    - Intradiscal electrothermal therapy
    - Nucleoplasty
6. Implantable therapies
    - Spinal cord stimulation
    - Implantable intrathecal drug administration system

Evaluation and Management

1. Evaluation
2. Medical Necessity Management

MAJOR OUTCOMES CONSIDERED

- Validity, specificity, and sensitivity of diagnostic interventions for spinal pain
- Patient's quality of life
- Patient's mood, activities of daily living
- Effectiveness of treatment in controlling pain (i.e., short-term and long-term pain relief)
- Complications of therapy
- Patient-reported pain intensity as recorded with standard pain scales
- Associated costs (e.g., healthcare expenditures, disability compensation, lost production, lost tax revenue)

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)
Hand-searches of Published Literature (Secondary Sources)
Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Not stated

NUMBER OF SOURCE DOCUMENTS

3155

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Designation of Levels of Evidence

Level I

Conclusive: Research-based evidence with multiple relevant and high-quality scientific studies or consistent reviews of meta-analyses

Level II

Strong: Research-based evidence from at least one properly designed randomized, controlled trial; or research-based evidence from multiple properly designed studies of smaller size; or multiple low quality trials

Level III

Moderate: a) Evidence obtained from well-designed pseudorandomized controlled trials (alternate allocation or some other method); b) evidence obtained from comparative studies with concurrent controls and allocation not randomized (cohort studies, case-controlled studies, or interrupted time series with a control group); c) evidence obtained from comparative studies with historical control, two or more single-arm studies, or interrupted time series without a parallel control group

Level IV

Limited: Evidence from well-designed nonexperimental studies from more than one center or research group; or conflicting evidence with inconsistent findings in multiple trials

Level V

Indeterminate: Opinions of respected authorities, based on clinical evidence, descriptive studies, or reports of expert committees

METHODS USED TO ANALYZE THE EVIDENCE

Review of Published Meta-Analyses
Systematic Review with Evidence Tables

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

In synthesizing the evidence, systematic reviews, randomized clinical trials, observational studies, and diagnostic accuracy studies were evaluated utilizing reporting criteria and quality evaluation criteria. For a particular technique, if at least ten randomized trials were not available, nonrandomized or observational studies were also included.

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

A policy committee, with broad representation, consisting of academic and clinical practitioners recognized as experts in one or more interventional techniques of concern and representing a variety of practices and geographic areas, were included and convened. This committee formalized the essentials of guidelines. This was followed by formulation of a series of potential evidence linkages, representing conclusions and statements about relationships between clinical interventions and outcomes. The elements of the guideline preparation process included literature searches, literature syntheses, systematic review, consensus evaluation, open forum presentations, formal endorsement by the Board of Directors of the American Society of Interventional Pain Physicians (ASIPP), and blinded peer review.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

Descriptions of the review of published cost analyses are provided in the body of the original guideline document for each interventional technique in subsections called "Cost Effectiveness."

METHOD OF GUIDELINE VALIDATION

Internal Peer Review
Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

The Board of Directors of the American Society of Interventional Pain Physicians (ASIPP) formally endorsed this guideline. The guideline also underwent blinded peer review.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

These recommendations are presented in abbreviated form. Readers should refer to the text of the original guideline document for a detailed discussion of each of the following topics.

Definitions for the designations of levels of evidence (level I [conclusive], level II [strong], level III [moderate], level IV [limited], and level V [indeterminate]) are provided at the end of the "Major Recommendations" field.

Diagnostic Interventional Techniques

Facet or Zygapophysial Joint Diagnostic Blocks

The accuracy of facet joint nerve blocks was strong in the diagnosis of lumbar and cervical facet joint pain, whereas it was moderate in the diagnosis of thoracic facet joint pain.

Provocative Discography

The evidence for cervical and thoracic discography is limited. The evidence for lumbar discography was strong for discogenic pain provided that lumbar discography is performed based on the history, physical examination, imaging data, and analysis of other precision diagnostic techniques. There is no evidence to support discography without other non-invasive or less invasive modalities of treatments or other precision diagnostic injections.

Transforaminal Epidural Injections

The evidence was moderate for transforaminal epidural injections or selective nerve root blocks in the preoperative evaluation of patients with negative or inconclusive imaging studies and clinical findings of nerve root irritation.

Sacroiliac Joint Blocks

The evidence for the accuracy of sacroiliac joint diagnostic injections was moderate for the diagnosis of sacroiliac joint pain.

Therapeutic Interventional Techniques

Facet Joint Interventions

- Intraarticular Blocks. For intraarticular injections of local anesthetics and steroids, there was moderate evidence for short-term and limited evidence for long-term improvement in managing low back pain and the evidence was negative in managing neck pain.
- Medial Branch Blocks. The evidence for lumbar and cervical medial branch blocks in managing chronic low back and neck pain was moderate.

- Medial Branch Neurotomy. Evidence for radiofrequency neurotomy of medial branches was moderate to strong for short-term and long-term relief of lumbar and cervical facet joint pain.

Epidural Injections

- Caudal Epidural Injections. The evidence for caudal epidural steroid injections with randomized trials and prospective trials was strong for short-term relief and moderate for long-term relief, in managing chronic low back and radicular pain. The evidence in postlumbar laminectomy syndrome and spinal stenosis was limited.
- Interlaminar Epidural Injections. The evidence of interlaminar epidural steroid injections in managing lumbar radiculopathy was strong for short-term relief and limited for long-term relief. In managing cervical radiculopathy, the evidence was moderate for short-term and long-term relief. The evidence was inconclusive in the management of neck pain, low back pain, and lumbar spinal stenosis.
- Transforaminal Epidural Injections. The evidence for lumbar transforaminal epidural steroid injections in managing lumbar nerve root pain was strong for short-term and moderate for long-term improvement. The evidence was moderate in managing cervical nerve root pain. The evidence was limited in lumbar post laminectomy syndrome, and lumbar spinal stenosis. The effectiveness of transforaminal epidural steroid injections in axial low back pain, lumbar disc extrusions, and axial neck pain was indeterminate.

Epidural Adhesiolysis

- Percutaneous Adhesiolysis. The evidence was strong in managing chronic low back and lower extremity pain.
- Endoscopic Adhesiolysis. Evidence for spinal endoscopy was strong for short-term relief and moderate for long-term relief, in managing chronic refractory low back and lower extremity pain.

Sacroiliac Joint Interventions

- Intraarticular Injections. The evidence for intraarticular sacroiliac joint injections was moderate for short-term relief and limited for long-term relief.
- Radiofrequency Neurotomy. Evidence synthesis of radiofrequency neurotomy of sacroiliac joints included only retrospective evaluations with small numbers of patients, providing indeterminate evidence for managing sacroiliac joint pain.

Intradiscal Therapies

- Intradiscal Electrothermal Therapy. The evidence for intradiscal electrothermal therapy (IDET) was strong for short-term relief and moderate for long-term relief in managing chronic discogenic low back pain.
- Nucleoplasty. The evidence of nucleoplasty is limited in managing lumbar discogenic pain.

Implantable Therapies

- Spinal Cord Stimulation. The evidence for spinal cord stimulation in failed back surgery syndrome and complex regional pain syndrome was strong for short-term relief and moderate for long-term relief.
- Implantable Intrathecal Drug Administration System. The evidence for implantable intrathecal infusion systems was strong for short-term improvement in pain of malignancy or neuropathic pain. The evidence was moderate for long-term management of chronic pain.

Evaluation and Management

Evaluation

Appropriate history, physical examination, and medical decision making are essential. There are numerous acceptable medical methods to evaluate a chronic spinal pain patient. These methods vary from physician to physician and textbook to textbook. The guidelines established by the Centers for Medicare and Medicaid Services (CMS) aid the physician in performing a comprehensive and complete evaluation, and assist in complying with regulations. The CMS guidelines define five levels of services. The three crucial components of evaluation and management services are history, physical examination, and medical decision-making. Other components include counseling, coordination of care, nature of presenting problem, and time.

Medical Necessity Management

The following criteria should be considered carefully in performing interventional techniques:

1. Complete initial evaluation, including history and physical examination
2. Physiological and functional assessment, as necessary and feasible
3. Determination of indications and medical necessity:
    - Suspected organic problem
    - Nonresponsiveness to less invasive modalities of treatments except in acute situations such as acute disc herniation, herpes zoster and postherpetic neuralgia, reflex sympathetic dystrophy, and intractable pain secondary to carcinoma
    - Pain and disability of moderate-to-severe degree
    - No evidence of contraindications such as severe spinal stenosis resulting in intraspinal obstruction, infection, or predominantly psychogenic pain
    - Responsiveness to prior interventions with improvement in physical and functional status to justify repeat blocks or other interventions
    - Repeating interventions only upon return of pain and deterioration in functional status

Delivery of Interventional Technology

Frequency and total number of injections or interventions are key issues, although controversial and rarely addressed. Descriptions of the frequency of various types of interventional techniques are described here. These are based on available evidence and consensus to the safety, clinical effectiveness, and cost

effectiveness. However, these are not based on evidence synthesis methodology. Descriptions are provided only for some commonly used procedures.

Facet Joint Injections and Medial Branch Blocks

- In the diagnostic phase, a patient may receive two procedures at intervals of no sooner than 1 week or, preferably, 2 weeks.
- In the therapeutic phase (after the diagnostic phase is completed), the suggested frequency would be 2 months or longer between injections, provided that $\geq$50% relief is obtained for 6 weeks.
- If the interventional procedures are applied for different regions, they may be performed at intervals of no sooner than 1 week or preferably 2 weeks for most types of procedures. It is suggested that therapeutic frequency remain at 2 months for each region. It is further suggested that all regions be treated at the same time, provided all procedures can be performed safely.
- In the treatment or therapeutic phase, the interventional procedures should be repeated only as necessary according to the medical necessity criteria, and it is suggested that these be limited to a maximum of six times for local anesthetic and steroid blocks for a period of 1 year, per region.
- Under unusual circumstances with a re-current injury or cervicogenic headache, procedures may be repeated at intervals of 6 weeks after stabilization in the treatment phase.

Medial Branch Neurotomy

- The suggested frequency would be 3 months or longer between each procedure, provided that $\geq$50% relief is obtained for 10 to 12 weeks.
- The therapeutic frequency for medial branch neurotomy should remain at intervals of at least 3 months for each region. It is further suggested that all regions be treated at the same time, provided all procedures are performed safely.

Epidural Injections

- Epidural injections include caudal, interlaminar, and transforaminal.
- In the diagnostic phase, a patient may receive two procedures at intervals of no sooner than 1 week or preferably, 2 weeks, except in cancer pain or when a continuous administration of local anesthetic is employed for reflex sympathetic dystrophy.
- In the therapeutic phase (after the diagnostic phase is completed), the suggested frequency of interventional techniques should be 2 months or longer between each injection, provided that $\geq$50% relief is obtained for 6 to 8 weeks.
- If the neural blockade is applied for different regions, they may be performed at intervals of no sooner than 1 week and preferably 2 weeks for most type of procedures. The therapeutic frequency may remain at intervals of at least 2 months for each region. It is further suggested that all regions be treated at the same time, provided all procedures can be performed safely.
- In the treatment or therapeutic phase, the interventional procedures should be repeated only as necessary according to medical necessity criteria, and it is suggested that these be limited to a maximum of 6 times per year.

- Under unusual circumstances with a recurrent injury, carcinoma, or reflex sympathetic dystrophy, blocks may be repeated at intervals of 6 weeks after diagnosis/stabilization in the treatment phase.

Percutaneous Adhesiolysis

- The number of procedures are preferably limited to:
    - With a 3-day protocol, 2 interventions per year
    - With a 1-day protocol, 4 interventions per year

Spinal Endoscopic Adhesiolysis

The procedures are preferably limited to a maximum of 2 per year provided the relief was ≥50% for ≥4 months.

Sacroiliac Joint Injections

- In the diagnostic phase, a patient may receive two procedures at intervals of no sooner than 1 week or, preferably, 2 weeks.
- In the therapeutic phase (after the diagnostic phase is completed), the suggested frequency would be 2 months or longer between each injection, provided that ≥50% relief is obtained for 6 weeks.
- If the procedures are done for different joints, they may be performed at intervals of no sooner than 1 week or preferably 2 weeks. It is suggested that therapeutic frequency remain at 2 months for each joint. It is further suggested that both joints be treated at the same time, provided the injections can be performed safely.
- In the treatment or therapeutic phase, the interventional procedures should be repeated only as necessary according to the medical necessity criteria, and it is suggested that they be limited to a maximum of six times for local anesthetic and steroid blocks for a period of 1 year, per region.
- Under unusual circumstances with a re-current injury, procedures may be repeated at intervals of 6 weeks after stabilization in the treatment phase.

Sacroiliac Joint Radiofrequency Neurotomy

- The suggested frequency is 3 months or longer between each procedure, provided that ≥50% relief is obtained for 10 to 12 weeks.
- The therapeutic frequency for neurotomy should remain at intervals of at least 3 months for each region. It is further suggested that all regions be treated at the same time, provided all procedures are performed safely.

Definitions:

Designation of Levels of Evidence

Level I

Conclusive: Research-based evidence with multiple relevant and high-quality scientific studies or consistent reviews of meta-analyses

Level II

Strong: Research-based evidence from at least one properly designed randomized, controlled trial; or research-based evidence from multiple properly designed studies of smaller size; or multiple low quality trials

Level III

Moderate: a) Evidence obtained from well-designed pseudorandomized controlled trials (alternate allocation or some other method); b) evidence obtained from comparative studies with concurrent controls and allocation not randomized (cohort studies, case-controlled studies, or interrupted time series with a control group); c) evidence obtained from comparative studies with historical control, two or more single-arm studies, or interrupted time series without a parallel control group

Level IV

Limited: Evidence from well-designed nonexperimental studies from more than one center or research group; or conflicting evidence with inconsistent findings in multiple trials

Level V

Indeterminate: Opinions of respected authorities, based on clinical evidence, descriptive studies, or reports of expert committees

CLINICAL ALGORITHM(S)

The original guideline document contains algorithms for:

- Approach to Diagnosis of Chronic Low Back Pain without Disc Herniation
- Application of Therapeutic Interventional Techniques in Management of Chronic Low Back Pain
- Approach to Diagnosis of Chronic Neck Pain without Disc Herniation

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

In developing these guidelines, all types of evidence were utilized. If an evidence-based approach failed to provide adequate levels of evidence, consensus and expert opinions were utilized.

The levels of evidence supporting the guidelines are identified in the "Major Recommendations" field.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Assist both physicians and patients in making appropriate health care decisions for the diagnosis and treatment of chronic spinal pain

POTENTIAL HARMS

Complications from diagnostic and therapeutic interventions are summarized briefly below. Refer to the original guideline document for a more detailed description.

Complications from Diagnostic Techniques

- Facet joint injections-hemorrhage, dural puncture, spinal cord trauma, infection, intra-arterial or intravenous injection, chemical meningitis, neural trauma, paralysis, pneumothorax, radiation exposure, facet capsule rupture, hematoma formation, steroid side effects, and epidural, subdural or subarachnoid spread
- Discography procedures-discitis, subdural abscess, spinal cord injury, vascular injury, epidural and prevertebral abscess
- Transforaminal epidural injections--dural puncture, infection, intravascular injection, air embolism, vascular trauma, particulate embolism, cerebral thrombosis, epidural hematoma, neural or spinal cord damage, and complications related to administration of steroids. Recent reports of paraplegia, vertebral artery dissection, neurological disorders, and death are concerning.
- Sacroiliac joint injections-infection, trauma to the sciatic nerve, embolic phenomena, and complications related to drug administration

Complications from Therapeutic Techniques

- Facet joint interventions-dural puncture, spinal cord trauma, infection, intraarterial or intravenous injection, spinal anesthesia, chemical meningitis, neural trauma, pneumothorax, radiation exposure, facet capsule rupture, hematoma formation, and steroid side effects. In addition, potential side effects with radiofrequency denervation include painful cutaneous dysesthesias, increased pain due to neuritis or neurogenic inflammation, anesthesia dolorosa, cutaneous hyperesthesia, pneumothorax, and deafferentation pain.
- Caudal, interlaminar, and transformational epidural injections-dural puncture, spinal cord trauma, infection, hematoma formation, abscess formation, subdural injection, intracranial air injection, epidural lipomatosis, pneumothorax, nerve damage, headache, death, brain damage, increased intracranial pressure, intravascular injection, vascular injury, cerebral vascular or pulmonary embolus, and effects of steroids. Spinal cord trauma and spinal cord or epidural hematoma formation are catastrophic complications, but rarely seen following epidural injections.
- Adhesiolysis and spinal endoscopy with lysis of adhesions-spinal cord compression, excessive intraspinal and intracranial pressures, epidural hematoma, bleeding, infection, increased intraocular pressures with resultant visual deficiencies and even blindness, and dural puncture. Unintended subarachnoid or subdural puncture with injection of local anesthetic or hypertonic saline is one of the major complications of the procedure with catheter adhesiolysis. Hypertonic saline injected into the subarachnoid space

has been reported to cause cardiac arrhythmias, myelopathy, paralysis, and loss of sphincter control.
- Sacroiliac joint interventions-infection, hematoma formation, neural damage, trauma to the sciatic nerve, potential gas and vascular particulate embolism, leakage of the drug from the joint, and other complications related to drug administration
- Intradiscal electrothermal therapy (IDET)-catheter breakage, nerve root injuries, post-IDET disc herniation, cauda equina syndrome, infection, epidural abscess, and spinal cord damage
- Nucleoplasty-neural trauma, cauda equina syndrome, and other neurological complications
- Spinal cord stimulation-infection, hematoma, nerve damage, lack of appropriate paraesthesia coverage, paralysis, nerve injury, and death
- Implantable intrathecal drug administration systems-post-dural puncture headache, infection, nausea, urinary retention, pruritus, catheter and pump failure, pedal edema, hormonal changes, granuloma formation, and decreased libido

CONTRAINDICATIONS

CONTRAINDICATIONS

Contraindications include ongoing bacterial infection, possible pregnancy, bleeding diathesis, and anticoagulant therapy. Precautions are warranted in patients with antiplatelet or anticoagulant therapy, diabetes mellitus and artificial heart valves.

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

These guidelines are intended for use by interventional pain physicians. However, these guidelines do not constitute inflexible treatment recommendations. It is expected that a provider will establish a plan of care on a case-by-case basis, taking into account an individual patient's medical condition, personal needs, and preferences, and the physician's experience. Based on an individual patient's needs, treatment different from that outlined here could be warranted. These guidelines do not represent a "standard of care."

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

IMPLEMENTATION TOOLS

Clinical Algorithm

For information about availability, see the "Availability of Companion Documents" and "Patient Resources" fields below.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Living with Illness

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Boswell MV, Shah RV, Everett CR, Sehgal N, Mckenzie-Brown AM, Abdi S, Bowman RC, Deer TR, Datta S, Colson JD, Spillane WF, Smith HS, Lucas LF, Burton AW, Chopra P, Staats PS, Wasserman RA, Manchikanti L. Interventional techniques in the management of chronic spinal pain: evidence-based practice guidelines. Pain Phys 2005;8(1):1-47. [764 references]

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2003 (revised 2005)

GUIDELINE DEVELOPER(S)

American Society of Interventional Pain Physicians - Medical Specialty Society

SOURCE(S) OF FUNDING

American Society of Interventional Pain Physicians

GUIDELINE COMMITTEE

Research and Guideline Committee

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

The Research and Guideline Committee was responsible for developing the guideline. It consisted of the Executive Committee of the Board and all the authors.

Primary Authors: Mark V. Boswell, MD, PhD, Associate Professor of Anesthesiology, Chief, Pain Medicine Service, Director, Pain Medicine Fellowship,

Department of Anesthesiology, University Hospitals of Cleveland, Cleveland OH; Rinoo V. Shah, MD, Assistant Professor, Department of Anesthesiology and Pain Services, International Pain Institute, Texas Tech University Health Sciences Center, Lubbock, TX; Clifford R. Everett, MD, Assistant Professor, Department of Orthopaedics and Physical Medicine and Rehabilitation, University of Rochester Medical Center, Rochester, NY; Nalini Sehgal, MD, Medical Director, Interventional Pain Program, Assistant Professor, Department of Orthopedics and Rehabilitation, University of Wisconsin School of Medicine, Madison, WI; Anne Marie Mckenzie-Brown, MD, Assistant Professor of Anesthesiology, Division Director, Division of Pain Medicine, Emory Department of Anesthesiology, Emory Center for Pain Medicine, Atlanta GA; Salahadin Abdi, MD, PhD, Director, Massachusetts General Hospital Pain Center, Department of Anesthesiology and Critical Care, Boston MA; Richard C. Bowman, MD, PhD, The Center for Pain Relief, Charleston WV; Timothy R. Deer, MD, Chairman, Chronic Pain Committee, American Society of Anesthesiologists, Medical Director, The Center for Pain Relief, Charleston WV; Sukdeb Datta, MD, Director, Pain Management Center, VA Tennessee Valley Healthcare System, Nashville, TN; James D. Colson, MD, Clinical Assistant Professor of Anesthesiology, Attending Staff, Center for Interventional Pain Medicine, University Of Michigan, Ann Arbor, MI; William F. Spillane, MD, Anesthesiology/Neurology, Medical Director, Pain Control Center, Co-Director, Pain Fellowship Program, Assistant Clinical Professor, Department Of Anesthesiology, Wake Forest University Baptist Medical Center, Winston-Salem, NC; Howard S. Smith, MD, Associate Professor of Anesthesiology, Academic Director of Pain Management, Albany Medical College, Albany, NY; Linda F. Lucas, MD, Associate Professor, Department of Anesthesiology and Perioperative Medicine, Director of Pain Management Fellowship, University of Louisville School of Medicine, Louisville, KY; Allen W. Burton, MD, Section Chief, Pain Management Services, Associate Professor of Anesthesiology, M.D. Anderson Cancer Center, Department Anesthesiology, University of Texas, Houston, TX; Pradeep Chopra, MD, Assistant Professor of Medicine (Clinical), Department of Medicine, Division of Biology and Medicine, Brown Medical School, Providence, RI, Assistant Professor of Anesthesiology(Adjunct), Boston University School of Medicine, Medical Director, Interventional Pain Management Center, Pawtucket, RI; Peter S. Staats, MD, Interventional Pain Management, Shrewsbury, NJ; Ronald A. Wasserman, MD, Clinical Assistant Professor, Department of Anesthesiology, Director, Pain Clinic University of Michigan, Ann Arbor MI; Laxmaiah Manchikanti, MD, Medical Director, Pain Management Center of Paducah, Paducah, KY, Assistant Clinical Professor of Anesthesiology and Perioperative Medicine, University of Louisville School of Medicine, Louisville, KY

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Disclaimer: Nothing of monetary value was received in the preparation of the guidelines.

Conflict of Interest: None

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: Manchikanti L, Staats PS, Singh V, Schultz DM, Vilims BD, Jasper JF, Kloth DS, Trescot AM, Hansen HC, Falasca TD, Racz GB, Deer TR, Burton AW, Helm S, Lou L, Bakhit CE, Dunbar EE, Atluri SL, Calodney AK, et al. Evidence-based practice guidelines for interventional techniques in the management of chronic spinal pain. Pain Phys 2003;6:3-81.

GUIDELINE AVAILABILITY

Electronic copies: Available in Portable Document Format (PDF) from the American Society of Interventional Pain Physicians Web site.

Print copies: Available from the American Society of Interventional Pain Physicians, 2831 Lone Oak Road, Paducah, KY 42003; Phone: (270) 554-9412; Fax: (270) 554-8987; email: asipp@asipp.org.

AVAILABILITY OF COMPANION DOCUMENTS

The following is available:

- Manchikanti L, Abdi S, Lucas LF. Evidence synthesis and development of guidelines in interventional pain management. Pain Phys 2005;8:73-86.

Electronic copies: Available in Portable Document Format (PDF) from the American Society of Interventional Pain Physicians Web site.

PATIENT RESOURCES

None available

NGC STATUS

This NGC summary was completed by ECRI on July 21, 2003. The information was verified by the guideline developer on July 31, 2003. This NGC summary was updated on May 16, 2005. The information was verified by the guideline developer on June 6, 2005.

COPYRIGHT STATEMENT

DISCLAIMER

NGC DISCLAIMER

All guidelines summarized by NGC and hosted on our site are produced under the auspices of medical specialty societies, relevant professional associations, public or private organizations, other government agencies, health care organizations or plans, and similar entities.

Guidelines represented on the NGC Web site are submitted by guideline developers, and are screened solely to determine that they meet the NGC Inclusion Criteria which may be found at http://www.guideline.gov/about/inclusion.aspx.

NGC, AHRQ, and its contractor ECRI make no warranties concerning the content or clinical efficacy or effectiveness of the clinical practice guidelines and related materials represented on this site. Moreover, the views and opinions of developers or authors of guidelines represented on this site do not necessarily state or reflect those of NGC, AHRQ, or its contractor ECRI, and inclusion or hosting of guidelines in NGC may not be used for advertising or commercial endorsement purposes.

Readers with questions regarding guideline content are directed to contact the guideline developer.

Date Modified: 9/25/2006